

OHS21710

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SECTION 1           CHEMICAL PRODUCT AND COMPANY IDENTIFICATION  
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SUBSTANCE: SODIUM THIOSULFATE

## TRADE NAMES/SYNONYMS:

THIOSULFURIC ACID (H<sub>2</sub>S<sub>2</sub>O<sub>3</sub>), DISODIUM SALT; THIOSULFURIC ACID, DISODIUM SALT;  
DISODIUM THIOSULFATE; SODIUM HYPOSULFITE; SODIUM THIOSULFATE ANHYDROUS; SODIUM  
THIOSULPHATE; DISODIUM THIOSULPHATE; SODIUM THIOSULFATE (NA<sub>2</sub>S<sub>2</sub>O<sub>3</sub>); SODIUM  
OXIDE SULFIDE; SODIUM OXIDE SULFIDE (NA<sub>2</sub>S<sub>2</sub>O<sub>3</sub>); HYPO; SODOTHIOIOL; CHLORINE  
CONTROL; S-HYDRIL; CHLORINE CURE; DECHLOR-IT; KODAK FARMER'S REDUCER PART B;  
NA<sub>2</sub>S<sub>2</sub>O<sub>3</sub>; OHS21710; RTECS XN6476000

CHEMICAL FAMILY: inorganic, salt

CREATION DATE: Apr 18 1986  
REVISION DATE: Mar 22 2001

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SECTION 2           COMPOSITION, INFORMATION ON INGREDIENTS  
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COMPONENT: SODIUM THIOSULFATE  
CAS NUMBER: 7772-98-7  
EC NUMBER (EINECS): 231-867-5  
PERCENTAGE: 100

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SECTION 3           HAZARDS IDENTIFICATION  
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NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=0 REACTIVITY=0

## EMERGENCY OVERVIEW:

CHANGE IN APPEARANCE: hygroscopic

COLOR: colorless

PHYSICAL FORM: crystals, powder

ODOR: odorless

MAJOR HEALTH HAZARDS: No significant target effects reported.

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POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: no information is available

SKIN CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: no information is available

EYE CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: no information is available

INGESTION:

SHORT TERM EXPOSURE: diarrhea

LONG TERM EXPOSURE: bluish skin color

CARCINOGEN STATUS:

OSHA: No

NTP: No

IARC: No

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SECTION 4 FIRST AID MEASURES

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INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If a large amount is swallowed, get medical attention.

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SECTION 5 FIRE FIGHTING MEASURES

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FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

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### OCCUPATIONAL RELEASE:

Collect spilled material in appropriate container for disposal.

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## SECTION 7 HANDLING AND STORAGE

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STORAGE: Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

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## SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

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### EXPOSURE LIMITS:

#### SODIUM THIOSULFATE:

No occupational exposure limits established.

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any dust, mist, and fume respirator.

Any air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a dust, mist, and fume filter.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL STATE: solid  
COLOR: colorless  
CHANGE IN APPEARANCE: hygroscopic  
PHYSICAL FORM: crystals, powder  
ODOR: odorless  
MOLECULAR WEIGHT: 158.11  
MOLECULAR FORMULA:  $\text{Na}_2\text{S}_2\text{O}_3$   
BOILING POINT: Not applicable  
MELTING POINT: Not available  
VAPOR PRESSURE: Not applicable  
VAPOR DENSITY: Not applicable  
SPECIFIC GRAVITY (water=1): 1.667  
WATER SOLUBILITY: 50%  
PH: 6.5-8.0 (solution)  
VOLATILITY: Not applicable  
ODOR THRESHOLD: Not available  
EVAPORATION RATE: Not applicable  
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available  
SOLVENT SOLUBILITY:  
    Insoluble: alcohol

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SECTION 10      STABILITY AND REACTIVITY

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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: None reported.

INCOMPATIBILITIES: acids, oxidizing materials, halogens, metal salts, metals

SODIUM THIOSULFATE:

ACIDS: Reacts releasing sulfur dioxide.  
CHLORINE (SOLUTIONS): Forms sodium hydrosulfate.  
HALOGENS: Reacts.  
IODINE: Incompatible.  
LEAD SALTS: Incompatible.  
MERCURY: Incompatible.  
MERCURY SALTS: Incompatible.  
METAL NITRATES: May form explosive mixtures.  
OXIDANTS: Reacts.  
POTASSIUM: Incompatible.  
POTASSIUM NITRATE: Mixture is explosive on heating.  
SILVER SALTS: Incompatible.  
SODIUM: Incompatible.  
SODIUM NITRATE: Mixture is explosive on heating.  
SODIUM NITRITE: May explode violently on heat drying.

## HAZARDOUS DECOMPOSITION:

Thermal decomposition products: oxides of sulfur, sodium

POLYMERIZATION: Will not polymerize.

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SECTION 11 TOXICOLOGICAL INFORMATION  
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## SODIUM THIOSULFATE:

## TOXICITY DATA:

5600 mg/kg intraperitoneal-mouse LD50 (J.T. Baker, Inc. MSDS); >2500 mg/kg intravenous-rat LD; 5200 mg/kg intraperitoneal-mouse LD50; 4 gm/kg subcutaneous-rabbit LDLo; 6 gm/kg subcutaneous-frog LDLo

ACUTE TOXICITY LEVEL: Insufficient Data.

## HEALTH EFFECTS:

## INHALATION:

## ACUTE EXPOSURE:

SODIUM THIOSULFATE: May cause irritation of the upper respiratory tract.

## CHRONIC EXPOSURE:

SODIUM THIOSULFATE: No data available.

## SKIN CONTACT:

## ACUTE EXPOSURE:

SODIUM THIOSULFATE: May cause irritation.

## CHRONIC EXPOSURE:

SODIUM THIOSULFATE: No data available.

## EYE CONTACT:

## ACUTE EXPOSURE:

SODIUM THIOSULFATE: May cause irritation.

## CHRONIC EXPOSURE:

SODIUM THIOSULFATE: No data available.

## INGESTION:

## ACUTE EXPOSURE:

SODIUM THIOSULFATE: Sodium thiosulfate is poorly absorbed from the bowel and acts as an osmotic cathartic. Ingestion of large amounts may cause diarrhea. The probable lethal dose for humans is 0.5-5.0 gm/kg.

## CHRONIC EXPOSURE:

SODIUM THIOSULFATE: Human exposure to 300 mg/kg of the pentahydrate, for seven days, resulted in cyanosis. Sodium thiosulfite is permitted as a

food additive. Possible human exposure exists, due to migration to food from packaging materials.

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## SECTION 12 ECOLOGICAL INFORMATION

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### ECOTOXICITY DATA:

FISH TOXICITY: 2000 ug/L 5 month(s) LETH (Mortality) Spotfin shiner  
(*Notropis spilopterus*)

INVERTEBRATE TOXICITY: <520000 ug/L 48 month(s) LTCN (Immobilization) Water  
flea (*Daphnia magna*)

ALGAL TOXICITY: 22000 ug/L 1-1.5 year(s) (Photosynthesis) Blue-green algae  
(*Spirulina labyrinthiformis*)

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## SECTION 13 DISPOSAL CONSIDERATIONS

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Dispose in accordance with all applicable regulations.

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## SECTION 14 TRANSPORT INFORMATION

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U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

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## SECTION 15 REGULATORY INFORMATION

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### U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):  
Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):

Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: No

CHRONIC: No

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: Not determined.

EUROPEAN REGULATIONS:

EC CLASSIFICATION (CALCULATED): Not determined.

GERMAN REGULATIONS:

WATER HAZARD CLASS (WGK):

STATE OF CLASSIFICATION: VwVwS

CLASSIFICATION UNDER HAZARD TO WATER: 0

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

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SECTION 16 OTHER INFORMATION  
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